

09/615,971

**REMARKS**

In view of the following discussion, the Applicants submit that none of the claims now pending in the application is anticipated under the provisions of 35 U.S.C. §102. Thus, the Applicants believe that all of these claims are now in allowable form.

**I. OBJECTION OF CLAIMS 5-7, 15 - 17**

Applicants acknowledge and express their appreciation for the indication in the Office Action that claims 5-7 and 15-17 contain allowable subject matter, "if rewritten in independent form including all of the limitations of the base claim and any intervening claims".

Responsive to the Examiner's objections to claims 5-7 and 15-17, Applicants respectfully request reconsideration of the Examiner's determination that these dependent claims depend upon a rejected base claim for the reasons set forth below.

It is respectfully submitted that Applicants' explanation below, places claims 5-7 and 15-17 in condition for allowance. Thus, the Applicants believe that all pending claims are in allowable form.

**II. REJECTION OF CLAIMS 1-4, 8-14, and 18 under 35 U.S.C. § 102(e)**

The Examiner rejected claims 1-4, 8-14, and 18 under 35 U.S.C. §102(e) as being anticipated by Cham et al. (US 6,353,679). The Applicants respectfully disagree.

Pending claims 1 and 11 recite:

"1. A method for tracking multiple objects in a video sequence comprising:

selecting an initial configuration comprising a plurality of objects;  
predicting a current configuration; and  
computing a likelihood for the current configuration." [Emphasis

added].

09/615,971

"11. A computer readable medium containing a program that, when executed by a processor, causes an image processing system to perform a method comprising:

selecting an initial configuration comprising a plurality of objects;  
predicting a current configuration; and  
computing a likelihood for the current configuration." [Emphasis added].

Pending claims 1 and 11 recite selecting an initial configuration comprising a plurality of objects and predicting a current configuration, see application, pages 6-7, and Figure 4. Referring to the subject application, page 3, lines 27-30, a configuration is defined as a group of objects. Thus, predicting the current configuration refers to predicting a current group of objects. The current configuration may be different than the initial configuration. For example, as recited in the subject application beginning on line 26 of page 6, new objects can be introduced, such as by occlusion, and existing objects may be deleted. Claims 1 and 11 further recite computing a likelihood for the current configuration.

In contrast, Cham et al. does not disclose or suggest selecting an initial configuration of objects. The Examiner's reliance on column 6, lines 16-18 of Cham et al. for doing so is misplaced. There, Cham et al. refers to "hypothesis sampling" to identify not an object or objects, but rather mathematical state space starting points to initiate a prediction for the next frame of data. Such starting values are not an initial configuration of objects.

Consequently, independent claims 1 and 11 are allowable. Furthermore, claims 2-4, 8, 11-14, and 18, which depend from one of those independent claims and which include additional limitations are also allowable.

Turning now to pending claim 9, that claim recites:

"9. A method of producing probability distributions of states for multiple objects in a video sequence comprising:  
performing hierarchical sampling of at least one frame of video in said

09/615,971

video sequence, wherein said sampling is performed in an object configuration and individual object states; and

repeating said sampling for each frame of video in said video sequence to track objects within the video sequence." [Emphasis added].

Pending claim 9 recites hierarchical sampling of an object configuration and individual object states. Cham et al. does not teach or disclose either an object configuration or individual object states. Consequently, Cham et al. does not disclose or suggest a hierarchical sampling of an object configuration and individual object states. The Examiner's reliance on column 6, lines 8-18 of Cham et al. for doing so is misplaced. There, Cham et al. refers to updating a likelihood approximation by hypothesis sampling to produce a plurality of state space starting points to initiate prediction for the next frame of data. Subsequently, Cham et al. discloses how that likelihood approximation is updated. Again, those state space starting points are not an object configuration. Furthermore, those state space starting points do not represent an individual object state.

Consequently, independent claim 9 is allowable. Furthermore, claim 10, which depends from claim 9 and which includes additional limitations is also allowable.

In view of the foregoing, Applicants respectfully request withdrawal of the 35 U.S.C. §102(e) rejection of claims 1-4, 8-14, and 18, and reconsideration and allowance of the pending claims.

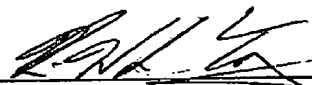
09/615,971

Conclusion

Thus, the Applicants submit that all of the pending claims now fully satisfy the requirements of 35 U.S.C. §102. Consequently, the Applicants believe that all pending claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the issuance of a final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

3/22/04  
Kin-Wah Tong, Attorney  
Reg. No. 39,400  
(732) 530-9404

Moser, Patterson & Sheridan, LLP  
595 Shrewsbury Avenue  
Shrewsbury, New Jersey 07702